SECRETARY'S ENVIRONMENTAL ASSESSMENT REPORT FOR COASTAL ZONE ACT PERMIT APPLICATION

Re: Peninsula Composting Company, LLC
February 2008

Introduction

As required by the "Regulations Governing Delaware's Coastal Zone" (Section H.3 [d]) dated May 11, 1999 and amended October 1, 2001, the Secretary is required to make an environmental assessment of the impact(s) of the project on the Coastal Zone of Delaware. This is done by evaluating the project's likely impact on the statutory criteria and making a preliminary determination of the sufficiency of the Offset Proposal. The following is such an environmental assessment of the proposed project described in an application for a Coastal Zone Act (CZA) Permit, with amendments, received from Peninsula Composting Company, LLC.

The fact that DNREC considers an application to be preliminarily, administratively complete does not constitute the Department's position as to whether the application should be approved or denied. That decision will not be made until after the public hearing. The purpose of the Secretary's written assessment is to assist the applicant and the public to focus on issues presented in the application. It constitutes an administrative determination that the application is sufficient to proceed to a public hearing. In addition, should the Department eventually issue the CZA Permit, it does not automatically guarantee the applicant will receive other required permits.

The Proposed Project

The applicant submitted a revised application for a CZA Permit on January 23, 2008 to construct and operate a food and wood waste composting operation at 601 Christiana Avenue in Wilmington. This site is zoned M-2 for light manufacturing and the proposed use of the premises is permitted as a "special exception" use by the City of Wilmington's Zoning Code. Currently, a small portion of the site is being used to receive, store and ship bulk and break-bulk materials. It is also being used for a concrete recycling operation as permitted by CZA Permit 301.

A total of 160,000 tons per year of raw material and soils will be accepted at the facility to produce topsoil and compost. The raw materials for composting will consist of clean source separated food materials generated by restaurants, universities, schools, sports venues, prisons, hospitals, etc. Approximately 70-75% of the raw material will be food materials. The food material will be supplemented with untreated wood products and wood yard waste which will serve as a bulking agent and to adjust moisture content. After the compost is finished curing, some of the finished product will be mixed with soils to produce topsoil. The facility will produce 250,000 yd^3 of compost and topsoil annually.

Trucks will deliver the raw materials on 100 yd^3 walking floor trailers, 35 yd^3 self contained packers, and 16 yd^3 rear load vehicles. It is expected that 35 trucks per day

will deliver food and wood materials and an additional 5 trucks per day will deliver soils. The receiving building will be a fully enclosed, pre-engineered metal building. This building will include the grinding and mixing equipment which will size and blend the materials and prepare the materials for composting. The receiving building will be covered with a biofilter for odor control.

After the material is properly sized and blended, it is composted in forced aeration windrows during three phases. Phase 1 consists of 27 windrows. Each windrow is approximately 185 feet long, 26 feet high and 10 feet high and will contain approximately 1,000 yd^3 of blended material. Each windrow is covered with a Gore™ fabric and air is forced into the windrow to provide the necessary oxygen required by the composting process.

After 4 weeks of Phase 1 composting, the material is transported by front end loader to Phase 2. Phase 2 consists of 14 windrows of the same size as Phase 1 and covered with the Gore™ fabric. If the material is too dry, water from the stormwater basins or municipal water will be added during this phase. Air is added by forced aeration during this phase as well to provide necessary oxygen. After two weeks, the material is transported by front end loader to Phase 3.

Phase 3 consists of 13 windrows of the same size as Phases 1 and 2. By this time, the material is stable enough so that it does not require the Gore™ fabric cover, but it is still subject to the forced aeration. After 2 weeks in Phase 3, the material is screened and sorted. Wood material that is greater than ½" is returned to the receiving building for use as a bulking agent. The finished compost will be stockpiled onsite or blended with soils to produce topsoil.

The composting process will utilize technology developed and supplied by W.L. Gore™ & Associates that utilizes a cover system for the windrows in order to accelerate composting while controlling odors. This facility is modeled on the successful Cedar Grover composting Facility located in Everett, Washington.

Ten new employees will be hired for the proposed project. Peninsula has executed a Community Benefits Agreement with the Southbridge Community in which Peninsula commits to minority hiring, subcontracting goals and neighborhood outreach programs.

Sufficiency Statement

This application for a CZA Permit, including supplemental information, has been reviewed by the Department to determine its completeness. After a thorough review of the company's application and file, the Department considers this application to be administratively complete and sufficient for proceeding to public hearing.

Environmental Assessment

Air emissions are expected to increase by 1.9 tons per year as a result of the proposed project. It is estimated that 0.4 tons per year of PM will be generated by the handling of materials after Phase 2. It is also estimated that up to 1.5 tons per year of VOC could be

generated in upset conditions if the food waste was allowed to stagnate in the receiving building for an extended period of time.

The proposed project will take place on eighteen acres of previously developed land. This project will not require any additional land clearing and will not disturb any threatened or endangered species. Fill will be brought in to raise the property above the 100 year flood plain and to provide for proper site drainage. The project will include a new 100 ft by 150 ft metal building and an associated biofilter. Sixteen acres of the land will be paved with concrete and asphalt to accommodate the project.

All of the construction associated with the proposed facility will be performed in areas that were previously developed as part of the Potts Property Hazardous Substance Cleanup Act (HSCA) site and the Halby Chemical Federal Superfund site. These developed areas are part of the cover and cap remedy for the site which limits the input of metals to the Christina River from shallow groundwater to acceptable levels.

Trenches cut in the center of the concrete pads will duct air by forced aeration into the compost windrows and will also serve to collect any leachate coming from the composting material. The applicant estimates that 1 gallon per day may be produced from each of the windrows. Any leachate collected from under the compost pile will be piped to the municipal sewer system. A separate collection system will handle the stormwater through a system of pipes and manholes that will lead to the existing stormwater basins. No process wastewater will be generated from this facility. Approximately 500 gallons of water per day will be required of the City of Wilmington public water supply to accommodate sanitary facilities onsite.

Stormwater on-site will be increased due to the impervious surfaces; however, it will be diverted to manholes and sediment ponds where any pollutants can be collected and filtered. The applicant is also required to obtain a stormwater construction permit from the Division of Soil and Water and an industrial stormwater permit from the Division of Water Resources. The pollutants likely to be in the stormwater would be fine particulates of cured compost and wood chips. Currently, the site has uncontrolled runoff over a packed gravel surface that discharges to existing retention ponds and to the Christina River.

Approximately 7 tons per day of solid waste is anticipated as a result of this project. The solid waste will primarily be plastic packaging waste and reject material that will be separated from the finished compost by screening. The solid waste will be placed in containers and removed from the site for proper disposal at an appropriate facility. The composting operation will not produce any hazardous waste.

There is a slight potential for odors associated with this project. These odors are not expected to travel past the property boundary. Composting operations would normally generate noxious odors which would be a concern for neighboring land use occuments. However, the Gore™ Composting System minimizes the potential for odors by combining a highly controlled environment with a physical barrier that does not allow

odors to escape. The proposed facility is modeled on the successful Cedar Grove Composting Facility located in Everett, Washington where odors are effectively mitigated.

Offset Proposal

The facility proposes to relocate the existing concrete recycling operation to a paved site across the street in order to offset some of the air emissions associated with this new project. Because the operation is currently taking place on an unpaved surface, moving the operation to a surface that is paved is projected to reduce PM by 8.27 tons per year. The reduction in air emissions is achieved because vehicle travel over paved surfaces produces less particulate emissions than similar traffic over unpaved surfaces.

The diversion of the food wastes to this proposed composting facility will also result in a decrease of air emissions. There will be a decrease in equipment usage that would normally have to process the material at a landfill. This reduce emissions by 0.27 tons per year of PM, 0.87 tons per year of CO, 3.41 tons per year of NO_x, 0.21 tons per year of SO_x, and 0.26 tons per year of HC. These calculations are based upon average equipment usage at a landfill using the EPA's Waste Reduction Model (WARM).

Additionally, the diversion of food wastes from a landfill will reduce the amount of greenhouse gases produced during the decomposition process. Using the EPA's WARM, the calculations show that by processing the material and not allowing it to decompose in a landfill, that 23,251 tons per year of CO_2 equivalent would not be released into the atmosphere.

The applicant estimates that initially 60% of the food materials and 100% of the wood materials will be from Delaware. The applicant expects that marketing efforts will be successful in increasing the percentage of food materials from Delaware sources from 60% to 80%. The remaining food materials will be from southeastern Pennsylvania or nearby states within a 40 mile radius of the site. This facility will also provide another disposal option for materials subject to the January 2008 yard waste ban in New Castle County.

In order to offset the increased runoff that will occur as a result of the increase in impervious surfaces on the property, the facility will use Stormwater Best Management Practices (BMP). The facility will treat the stormwater in the manholes and the retention basins to screen out any particulates as part of these BMPs. In the retention basins, the water will be aerated in order to increase the dissolved oxygen content of the water entering the Christina River from the site. The facility will also use silt fence around the finished compost and topsoil piles in order to minimize the finished products intrusion into the stormwater.

Issues related to this project have been addressed with the community of Southbridge. The community of Southbridge in South Wilmington is located 0.25 miles from the project site. Residents from Southbridge were taken to Washington and Nantucket to observe facilities with similar composting systems, and the applicant has entered into a

Community Benefits Agreement with the community in order to provide jobs for residents. The applicant will also plant a border of native trees around the site in order to increase the visual aesthetics of the area and make a financial contribution to the South Wilmington Special Area Management Plan (SAMP).

Conclusion

The application under review depicts a new manufacturing operation at a site presently zoned and developed for industrial activity in the Coastal Zone. After reviewing the anticipated environmental impacts from this proposed project and the offset proposal, the Department finds that this project will not have an overall negative impact on Delaware's Coastal Zone. Furthermore, once all the aspects of the Offset Proposal have been implemented, the proposed project will have a net positive impact on the environment of the Coastal Zone.

The applicant's CZA Permit application is preliminarily administratively complete. All questions in the application have been addressed and the Offset Proposal, to include all air emission reductions, Stormwater BMPs, the planting of native trees and the financial contribution to the South Wilmington SAMP, have been reviewed and provisionally accepted by the Department.

Approved: John A. Hughes

John A. Hughes
Secretary

Date: 2-28-08

Attachment